

We claim:

1. In a multi-user radio communication system having a network infrastructure with which a first mobile station and at least a second mobile station communicates data, the data forming portions of communication signals transmitted at selected power levels, an improvement of an assembly for

5 facilitating selection of the power levels at which to transmit the communication signals, said assembly comprising:

10 a signal generator coupled to the network infrastructure, said signal generator for generating a transmit power indication signal for transmission to at least a selected one of the first mobile station and the at least second mobile station, the transmit power indication signal of a value representative of a maximum allowable power level permitted of the selected power levels at which to transmit the communication signals.

2. The assembly of claim 1 wherein the multi-user radio communication system defines a point coordination function period, and wherein the transmit power indication signal generated by said signal generator is transmitted to a single selected one of the first and at least second selected one of the mobile stations, respectively.

3. The assembly of claim 2 wherein said signal generator further generates a power correction information signal for transmission to the single selected one of the mobile stations, the power connection information signal of a value representative of an amount at which the selected one of the mobile stations is to communicate the communication signals.

4. The assembly of claim 2 wherein the multi-user radio communication system further defines a contention free period, wherein the point coordination function forms a portion thereof and wherein the transmit power indication signal generated by said signal generator is generated during the point coordination function period of the contention free period.

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5. The assembly of claim 4 further comprising a mobile-station power-level calculator positioned at the selected one of the mobile stations, said mobile-station power-level calculator operable responsive to the value of the transmit power indication signal and to the value of the power correction information signal to calculate a power-level at which communication signals are to be generated by the selected mobile station.

6. The assembly of claim 5 wherein the power correction information signal is of a value responsive to the value of the transmit power information signal offset by the value of the power correction information signal.

7. The assembly of claim 6 wherein the radio communication system defines polling periods during which the network infrastructure polls a selected one of the first mobile station and the at least the second mobile station and wherein the power correction information signal is transmitted to the selected one of the first and at least second mobile stations, respectively, when the network infrastructure polls the selected one of the mobile stations.

8. The assembly of claim 1 wherein the transmit power indication signal generated by said signal generator is generated during selected intervals.

9. The assembly of claim 8 wherein the radio communication system defines beacon intervals within which beacon signals are broadcast by the network infrastructure and wherein the transmit power indication signal generated by said signal generator is broadcast as part of the beacon signals.

10. The assembly of claim 1 wherein the multi-user radio communication system defines a distributed coordination function period, and wherein the transmit power indication signal generated by said signal generator is transmitted to all of the first and at least second mobile stations, respectively.

11. The assembly of claim 10 wherein the multi-user radio communication system further defines a contention period, wherein the distributed coordination function period forms a portion thereof and wherein the transmit power indication signal generated by said signal generator is 5 generated during the distributed coordination function period of the contention free period.

12. The assembly of claim 11 wherein all of the first and at least second mobile stations transmit communication signals at power levels substantially corresponding to the maximum allowable power level indicated by the value of the transmit power indication signal.

13. The assembly of claim 11 wherein the radio communication system defines beacon intervals within which beacon signals are broadcast and wherein the transmit power indication signal generated by said signal generator is broadcast as part of the beacon signals.

14. The assembly of claim 1 wherein the radio communication system is operable generally pursuant to an IEEE 802.11 standard which defines a point coordination function period and a distributed coordination function period and wherein the transmit power indication signal is transmitted in a 5 first manner during the point-coordination function period and in a second manner during the distributed coordination function period.

15. The assembly of claim 14 wherein the first manner by which the transmit power indication signal is transmitted comprises transmission to a selected one of the first mobile station and at least second mobile station.

16. The assembly of claim 14 wherein the second manner by which the transmit power indication signal is transmitted comprises transmission to all of the first and at least second mobile stations, respectively.

17. In a method for communicating in a multi-user radio communication system having a network infrastructure with which a first

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18. The method of claim 17 wherein the radio communication system
defines a point coordination function period and wherein said operation of
transmitting comprises transmitting the transmit power indication signal to a
selected one of the first and at least second mobile stations, respectively,
during the point coordination function period.

19. The method of claim 18 further comprising the additional operations of sending a power correction information signal to the selected one of the mobile stations and selecting operating power levels at which communication signals are transmitted by the selected one of the mobile stations responsive to values of the power correction information signal and of the transmit power indication signal.

20. The method of claim 17 wherein the radio communication system defines a distributed coordination function period and wherein said operation of transmitting comprises transmitting the transmit power indication signal to all of the first and at least second mobile stations, respectively, during the distributed coordination function.

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